

58. The base station in claim 53, wherein the configuration information is received in a commonly-understood format.

59. A method of bringing a new base station capability into an existing communications network, comprising:

communicating capabilities of the base station from the base station to the network using a format that is vendor-independent;

preparing and communicating operational configuration information for the base station based on the capabilities of the base station, said configuration information is communicated in a vendor-independent format; and

receiving the configuration information at the base station in the vendor-independent format, and configuring the base station based on the configuration information.

60. The method in claim 59, wherein the vendor-independent format is also version-independent.

61. The method in claim 60, wherein the vendor-independent and version-independent format corresponds to an information model that can represent any base station irrespective of its vendor or version.

62. The method in claim 59, wherein the new base station capability is associated with a new base station being brought into the communication network.

63. The method in claim 59, wherein the new base station capability is associated with reconfiguring an existing base station in the communication network. --

REMARKS

This preliminary amendment adds new claims 26-63 to the patented claims 1-25. As required by 37 CFR §1.173(d)(2), these newly-added claims are underlined. Also as required by Rule 173, the status of the claims are as follows: all patent claims 1-25 and all added

Reissue of
U.S. Patent No. 6,041,228

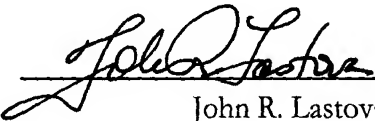
claims 26-63 are pending. Support for the newly added claims can be found in numerous places throughout U.S. Patent No. 6,041,228.

Support for the new independent claims 26, 36, 44, and 53 is found, for example, at column 2, lines 53-55; column 6, lines 4-7; and column 6, lines 42-column 7, line 9. Claims 27, 28, 29, and 45 find support, for example, in original patent claims 16 and 21. Claims 31, 37, 48, and 62 find example support in original patent claim 2. Claims 32, 38, 49, and 63 find example support in the abstract. Claims 33, 39, 50, and 54 have example support in original patent claim 11. Claims 34, 40, 51, and 55 find example support in original patent claim 13. Claims 35, 41, 52, and 56 find example support in original patent claims 14 and 15. Claims 42, 46, and 57 find example support in column 5, lines 40-44. Claims 30, 43, 47, and 58 find example support in column 5, lines 36-40. Claims 59-61 find example support in column 6, lines 5-7 and 48-50 as well as column 7, lines 1-4.

Examination on the merits is respectfully requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

--26. A method of configuring or re-configuring a base station in a communication network, comprising:

communicating capabilities of a base station from the base station to the communication network using a format of an abstract resource information model.

27. The method in claim 26, further comprising:
receiving configuration information from the network controller identifying operational parameters for use by the base station in handling cellular radio traffic.

28. The method in claim 26, further comprising:
providing operational configuration information to the base station;
receiving the operational configuration information at the base station; and
configuring the base station based on the operational configuration information.

29. The method in claim 28, wherein the operational configuration information is received at the base station in the format of the abstract resource information model.

30. The method in claim 28, wherein the configuration information is received at the base station using a commonly understood format.

31. A method according to claim 26, wherein the base station is a new base station being installed into the communication network.

32. The method in claim 31, wherein the base station is an existing base station to be reconfigured.

33. A method according to claim 26, wherein the base station automatically implements the abstract resource information model using hardware and software infrastructures of the base station.

34. A method according to claim 26, wherein the base station implements the abstract resource information model using combinational relationships between various logical hardware and software infrastructure objects of the base station and attribute information for the various logical hardware and software infrastructure objects of the base station.

35. A method according to claim 34, wherein the logical hardware and software infrastructure objects in the abstract resource information model include one or more of frequency spectrum information, maximum power information, and channel type information, and wherein the combinational relationships between the objects describe relationships between one or more of radio connection units, carrier units and antenna units.

36. A method relating to configuring or re-configuring a base station in a cellular radio network, comprising:

sending to a network controller capabilities information corresponding to operational capabilities of the base station, the capabilities information being in a format of an abstract resource information model, and

receiving configuration information from the network controller identifying operational parameters for use by the base station in handling cellular radio traffic.

37. A method according to claim 36, wherein the base station is a new base station being installed into the cellular radio network.

38. The method in claim 36, wherein the base station is an existing base station to be reconfigured.

39. A method according to claim 36, wherein the base station automatically implements the abstract resource information model based on hardware and software infrastructures of the base station.

40. A method according to claim 36, wherein the abstract resource information model is implemented using combinational relationships between various hardware and

software infrastructure objects of the base station and attribute information for various hardware and software infrastructure objects of the base station.

41. A method according to claim 40, wherein the hardware and software infrastructure objects in the abstract resource information model include one or more of frequency spectrum information, maximum power information, and channel type information, and wherein the combinational relationships between the objects describe relationships between one or more of radio connection units, carrier units and antenna units.

42. A method according to claim 36, wherein the configuration information is in the format of the abstract resource information model.

43. A method according to claim 36, wherein the configuration information is in a commonly understood format.

44. A system for use in a mobile communications network, comprising: a control node associated with the mobile communications network, and a base station configured to communicate its capabilities to the control node using a format of an abstract resource information model.

45. The system in claim 44, wherein the control node is configured to receive the base station capabilities and communicate operational configuration information to the base station so that base station is configured using the operational configuration information.

46. The system in claim 44, wherein the operational configuration information is in the format of the abstract resource information model.

47. The system in claim 44, wherein the operational configuration information is in a commonly understood format.

48. The system according to claim 44, wherein the base station is a new base station to be installed into the communication network.

49. The system according to claim 44, wherein the base station is an existing base station to be reconfigured.

50. The system in claim 44, wherein the base station is configured to automatically implement the abstract resource information model based on hardware and software infrastructures of the base station.

51. The system in claim 50, wherein the base station is configured to implement the abstract resource information model using combinational relationships between various hardware and software infrastructure objects of the base station and attribute information for various hardware and software infrastructure objects of the base station.

52. The system in claim 50, wherein the hardware and software infrastructure objects in the abstract resource information model include one or more of frequency spectrum information, maximum power information, and channel type information, and wherein the combinational relationships between the objects describe relationships between one or more of radio connection units, carrier units and antenna units.

53. A base station configured for addition into an existing cellular radio system coordinated by a control node in the cellular radio system, comprising:
radio transmitting and receiving circuitry, and
a controller, coupled to the radio transmitting and receiving circuitry, configured to send to the control node capabilities information corresponding to operational capabilities of the base station, the capabilities information being in a format of an abstract resource information model, and to use configuration information received from the control node in transmitting and receiving cellular radio traffic.

54. The base station in claim 53, wherein the controller includes:
means for automatically implementing the abstract resource information model based on hardware and software infrastructures of the base station.

55. The base station in claim 54, wherein the means for automatically implementing uses combinational relationships between various hardware and software infrastructure objects of the base station and attribute information for various hardware and software infrastructure objects of the base station.

56. The base station in claim 55, wherein the hardware and software infrastructure objects in the abstract resource information model include one or more of frequency spectrum information, maximum power information, and channel type information pertaining to the radio transmitting and receiving circuitry, and wherein the combinational relationships between the objects describe relationships between one or more of radio connection units, carrier units and antenna units included in the radio transmitting and receiving circuitry.

57. The base station in claim 53, wherein the configuration information is in received the format of the abstract resource information model.

58. The base station in claim 53, wherein the configuration information is received in a commonly-understood format.

59. A method of bringing a new base station capability into an existing communications network, comprising:
communicating capabilities of the base station from the base station to the network using a format that is vendor-independent;

preparing and communicating operational configuration information for the base station based on the capabilities of the base station, said configuration information is communicated in a vendor-independent format; and

receiving the configuration information at the base station in the vendor-independent format, and configuring the base station based on the configuration information.

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61. The method in claim 60, wherein the vendor-independent and version-independent format corresponds to an information model that can represent any base station irrespective of its vendor or version.

62. The method in claim 59, wherein the new base station capability is associated with a new base station being brought into the communication network.

63. The method in claim 59, wherein the new base station capability is associated with reconfiguring an existing base station in the communication network. --